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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,089	06/09/2000	John C. Ford	8064.002US0	2891

7590 03/19/2002

COUDERT BROTHERS
600 BEACH STREET
SAN FRANCISCO, CA 94109

EXAMINER

SZMAL, BRIAN SCOTT

ART UNIT

PAPER NUMBER

3736

DATE MAILED: 03/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/591,089

Applicant(s)

FORD, JOHN C.

Examiner

Brian Szmaj

Art Unit

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burdette et al in view of Franck et al.

Burdette et al discloses a real time brachytherapy spatial registration and visualization system and method that further discloses: an injection device having a hollow needle to deposit radioactive seeds at a site; a seed position detecting means for determining the position with reference to a coordinate system; real time seed position determining means; a dose calculating means for calculating a radiation dose; an energy transmitting means attached to the injection device; a detector at a fixed position; means for determining a position and orientation of the injection device; memory for storing earlier obtained patient data; a coordinate transforming means; the dose calculating means calculates a hypothetical radiation dose distribution; an injector controlling means; a display for providing a real time display of the providing a real time display of the injection needle; and updating means for updating earlier patient data. See whole document.

Burdette et al however, fails to disclose the use of a body fixed coordinate system with markers fixed to selected parts of the body; a reference point detecting means; and a referencing means for determining the position of a deposited seed.

Franck et al discloses a body mounted sensing system for stereotactic surgery, and further discloses a body fixed coordinate system with markers fixed to selected parts of the body; a reference point detecting means; and a referencing means for determining the position of a deposited seed. See Abstract and Column 16, lines 5-19.

Since both Burdette et al and Franck et al disclose means of performing a stereotactic surgical procedure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device and method of Burdette et al to include the use of a body fixed coordinate system, as per the teachings of Franck et al, in order to provide a more accurate system and method for determining the actual position of a radioactive seed to produce better results after the brachytherapy procedure. It also would have been obvious to use a needle marker for creating a position indication for the body fixed coordinate system since a needle is another means of a marker, just as anchors and threaded inserts can be used for markers.

Response to Arguments

3. Applicant's arguments filed January 19, 2002 have been fully considered but they are not persuasive. The argument that the present invention is distinguished over the prior art because the tip of the needle can be determined by the control system, is acknowledged, but the Examiner respectfully disagrees. Burdette et al discloses the utilization of the ultrasound probe to determine the position of the needles in real-time. See Column 13, lines 12-24. It is also well known in the art that the distal tip of the needle contains the opening to the interior lumen. Even though Burdette et al does not

disclose the determination of the opening on the distal tip of the needle, it is implicitly disclosed due to the general knowledge in the art pertaining to the location of the opening on the distal tip of the needle. Therefore, the present invention is not further distinguishable over Burdette et al.

4. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the argument that the different forms of surgery as disclosed in Burdette et al and Franck et al provide no motivation to combine the references, due to the disclosure of prostate surgery and brain surgery. The Examiner acknowledges the differences in the procedures required for performing procedures on different body parts, but the Examiner also acknowledges the fact that a tumor is a tumor, regardless of the location of the body. The surrounding tissue varies from location to location, but pathologies of abnormal growths remain the same. The stereotactic implantation of brachytherapy seeds at a location surrounding the prostate and at a location in the brain are performed utilizing essentially the same procedures. The difference in the overall location and the tissue surrounding the tumor do not provide a means for suggesting that there is not any motivation to combine the art.

Furthermore, Franck et al discloses the use of applying bone anchors to the pelvis to provide a means of a coordinate system for the lower abdominal region, and also discloses the use of providing brachytherapy seeds to necessary locations. See Figure 32 and Column 16, lines 5-6. The bone anchors are placed prior to the imaging of the patient via MRI or CT scanners. See Column 6, lines 32-47. Therefore, since Franck et al discloses the possible brachytherapy treatment that can be applied in the lower abdominal region while providing bone anchors on the pelvis, and Burdette et al discloses a brachytherapy system for treating the prostate, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the references to obtain the limitations in the current claims.


Conclusion

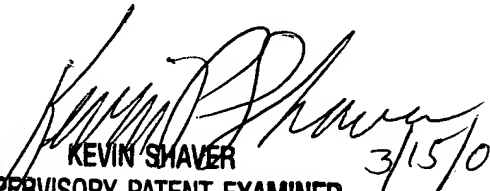
5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Szmalec whose telephone number is (703) 308-3737, and group fax number is (703) 308-0758. The examiner can normally be reached on Monday-Friday, with second Fridays off.

BS 
March 14, 2002


KEVIN SHAVER 3/15/02
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in ABANDONMENT of the application.